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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,392	08/27/2003	Katsuhiko Yamaguchi	10517/179	4595

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KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER

BOTTORFF, CHRISTOPHER

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/648,392	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Christopher Bottorff	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) 4, 5 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/4/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The response filed December 28, 2005 has been entered. Claims 1-18 are pending. Claims 6 and 11-18 are withdrawn as being drawn toward a non-elected species of a non-elected invention. Claims 1-5 and 7-10 are under consideration.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on November 4, 2005 was considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama et al. US 6,026,921.

Aoyama et al. disclose a hybrid vehicle comprising an internal combustion engine 2, a motor 4 which can output power to a driving shaft coupled with an axle, and an electric power storage device/means 15 which can store electric power obtained by converting at least part of power from the internal combustion engine to electric power and can supply the electric power to the motor. See Figure 1. A required driving force setting controller/means is provided in unit 16 which sets a required driving force

Art Unit: 3618

required for running according to an operation by a driver. See column 8, lines 18-35.

Also, a start time controller/means is provided in unit 16 which delays the start of the internal combustion engine after a predetermined time for engine warm up has elapsed since an instruction for starting the vehicle is given by an operator if the required driving force set by the required driving force setting controller/means is equal to or smaller than a predetermined driving force and the vehicle can run using only the motor. See column 8, lines 18-35.

An amount of electric power stored in the electric power storage device/means 15 is equal to or larger than a predetermined value, which is the value of power required to drive the vehicle with the motor, when the vehicle can run using only the motor. In addition, the internal combustion engine 2 is connected to the driving shaft. See Figure 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. US 6,026,921 in view of Kaiser et al. US 5,979,158.

Aoyama et al. do not disclose that the delay in the start of the internal combustion engine is based on the temperature detected by a temperature detecting

Art Unit: 3618

controller or that the predetermined time is longer than a preparation time necessary for making a sensor function properly. However, Kaiser et al. teach the desirability of delaying the start of an internal combustion engine by a start time controller 12 based on the temperature T_k detected by a temperature detecting controller 14. See column 4, lines 18-32. Kaiser et al. further teach the desirability of providing a predetermined time after which the internal combustion engine is started that is longer than a preparation time necessary for making a sensor 4, which is used for operation of the internal combustion engine, function properly. See column 4, lines 28-31.

From the teachings of Kaiser et al., delaying the start of the internal combustion engine of Aoyama et al. based on the temperature detected by a temperature detecting controller would have been obvious to one of ordinary skill in the art at the time the invention was made. This would help to increase the efficiency of the system.

From the further teachings of Kaiser et al., providing the predetermined time after which the internal combustion engine of Aoyama et al. is started such that the predetermined time is longer than a preparation time necessary for making a sensor function properly would have been obvious to one of ordinary skill in the art at the time the invention was made. This would ensure that the sensor is ready to perform when the engine is operating.

Allowable Subject Matter

Claims 4, 5, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

Art Unit: 3618

limitations of the base claim and any intervening claims. The prior art does not teach a delay time that is set as required by claims 4 and 5 or a preheating controller as defined in claim 8. These features, in combination with the further limitations of the claims, distinguish the claimed invention over the prior art.

Response to Arguments

Applicants' arguments filed December 28, 2005 have been fully considered but they are not persuasive.

Applicants assert that Aoyama et al. do not disclose starting the engine after a predetermined time period has elapsed since an instruction for starting the vehicle is given by the operator. However, column 8, lines 24-35, of Aoyama et al. discusses the predetermined time period. Initially, the engine is warmed up and is later started by the motor generator. When the instruction for starting the vehicle is given by an operator, the vehicle is propelled by the motor/generator. Propelling the vehicle by the motor/generator prior to engine start indicates that the required driving force is smaller than the predetermined force requiring engine propulsion. While the vehicle is propelled by the motor/generator, and after engine warm up, the motor/generator starts the engine. As is well established in the art, the process of starting the engine by the motor/generator involves applying torque from the motor/generator to the engine to increase the speed of the engine. When the engine speed is raised to an appropriate operating speed, the engine is said to be "started." The controller commanding the motor/generator to start the engine initiates this process.

The process of raising the speed of the engine with the motor/generator occurs during a quantifiable period of time in accordance with the designed capabilities of the motor/generator. This quantifiable period of time is a predetermined time within the scope of the rejected claims. Also, the duration of motor/generator operation prior to engine start is a predetermined time within the scope of the claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (571) 272-6692. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

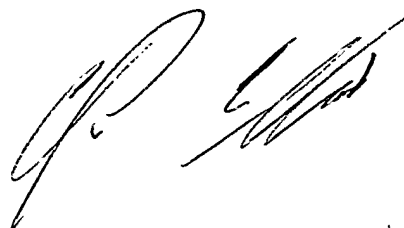
Art Unit: 3618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher Bottorff



CHRISTOPHER D. ELLIS
REGISTRY & COMPLIANCE
UNIT 3618